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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,717

09/05/2006

Masayuki Sassa

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EXAMINER

REISNER, NOAM S

ART UNIT

PAPER NUMBER

4176

MAIL DATE

DELIVERY MODE

02/19/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,717	Applicant(s) SASSA, MASAYUKI	
	Examiner NOAM REISNER	Art Unit 4176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/05/2006, 01/24/2007, 10/15/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the Applicant's communication filed on 09/05/2006.

In virtue of this communication, claims 1-4 are currently presented in the instant application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Specification

3. The disclosure is objected to because of the following informalities:
Page 44, line 10 "contract" should read "contrast".
Appropriate correction is required.

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4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claims 1, 2 objected to because of the following informalities:

Claim 1, lines 6 and 11 "relay lens" should read "relay lens group".

Claim 2, lines 1-2 "the relay lens including" should read "wherein the relay lens includes".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith (U.S. Patent No. 2,896,503).

Regarding claim 1, Smith discloses an image shooting apparatus, comprising: bi-splitting means for splitting incident light into two (see Fig. 4, items V-1, V-3, 41 and 42.

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Items 41 and 42 are slidable panels which can be slid into a position that prohibits incident light {e.g. light A-1} from hitting the light splitting means {V-1 and V-3}. If only one of the items 41 and 42 are implemented in this manner then the incident light is only split into two portions, either beams A-1 and A-2 or A-2 and A-3), which can be located at a position other than a position where a focal position of a main lens on which light from an object to be image-captured is incident coincides with a focal position of a relay lens which guides split light (see Fig. 4, items V-1 and V-3, the light splitting means is placed well away from the focal point of either a main lens or a relay lens); tri-splitting means for splitting incident light into three (see Fig. 4, items V-1 and V-3. V-1 and V-3 are light blocking means that separate the incoming light into three segments A-1 {left}, A-2 {center} and A-3 {right}), which can be located at a position other than the position where the focal position of the main lens on which light from the object to be image-captured is incident coincides with the focal position of the relay lens which guides split light (see Fig. 4, items V-1 and V-3, the light splitting means is placed well away from the focal point of either a main lens or a relay lens); and exchange means for exchanging between the bi-splitting means and tri-splitting means (see Fig. 4, items 41 and 42, by selectively opening panels 41 and 42 the light can be selectively split into one, two, or three segments.).

Regarding claim 2, Smith discloses all of the limitations of claim 1, and also discloses that the relay lens includes a focus lens group which includes a convex lens group having at least one convex lens and a concave lens group having at least one concave lens (see Fig. 24, items A, B, C, and D), wherein at least one of the convex

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lens group and the concave lens group in the focus lens group is moved to perform an adjustment in which an optical path length of each of the two split light is made equal to an optical path length of each of the three split light (see Column 16, lines 42-46. The lens B is movable so as to enable the optical path length of the incident to be adjusted. Ideally, since the optical path length is not affected by the switching means, the two split optical path length is the same as the three split path length, but if it is not, the movable lens B can be adjusted to correct the difference.).

Regarding claim 3, Smith discloses all of the limitations of claim 1, and also discloses that the image shooting apparatus further comprises a reflecting means (see Fig. 4, items M-1 and M-3) for reflecting light outputted from the bi-splitting means and the tri-splitting means (light A-3, separated by light blocking means V-3, is reflected by mirror M-2, and light A-1, separated by light blocking means V-1, is reflected by mirror M-1.), wherein the reflecting means is mechanically moved to perform an adjustment in which an optical path length of each of the two split light is made equal to an optical path length of each of the three split light (see Fig. 14, items 74 and 75. The thumbscrews 74 and 75 are a mechanical means for adjusting the angle of the mirror, which changes the optical path length of the intersecting light. Ideally, since the optical path length is not affected by the switching means, the two split optical path length is the same as the three split path length, but if it is not, the adjustment means of the mirrors can be adjusted to correct the difference.).

Regarding claim 4, Smith discloses all of the limitations of 1, and also discloses that the image shooting apparatus is connectable to at least one camera (see Fig. 4, C-

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1, C-2, and C-3) and further comprising adjusting means for performing an adjustment in which an optical path length of each of the two split light is made equal to an optical path length of each of the three split light, the adjusting means being inserted on an optical path between the main lens and the camera (see Fig. 24, item B. The adjustable lens B is disposed in the optical path between the main lens A and the camera C-1, C-2, or C-3 {the lenses are in the lens units L-1, L-2, and L-3}. The adjustable lens B is capable of adjusting the optical path length of the incoming light {see argument above}).

Citation of Relevant Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Hoch (U.S. Patent No. 2,828,664) discloses a tri-splitting image shooting apparatus.

Prior art Kurahashi et al. (U.S. Patent No. 5,937,212) discloses a bi-splitting image shooting apparatus and switching mechanism.

Prior art Yoneyama et al (U.S. Patent No. 5,581,314) discloses a bi-splitting image shooting apparatus and a switching mechanism.

Prior art Lo et al. (U.S. Patent No. 5,727,242) discloses a bi-splitting and tri-splitting image shooting apparatus.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOAM REISNER whose telephone number is (571)270-7542. The examiner can normally be reached on Monday thru Friday from 7:30am to 5:00pm with every alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thuy Tran, can be reached at (571)272-1828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/NOAM REISNER/
Examiner, Art Unit 4176
02/09/2009

/Thuy Vinh Tran/
Supervisory Patent Examiner, Art Unit 4176
02/13/2009